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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,231	07/14/2003	Wilbur H. Crawley	60,130-1786/03MRA0269	5823

26096 7590 01/04/2005

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EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,231

Applicant(s)

CRAWLEY, WILBUR H.

Examiner

Minh-Chau T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 6-8, 11 and 18-20 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (6,641,646 B2).

Rosenberg discloses a method for cleaning a particulate filter (10) including the steps of flowing a fluid into an outlet (14) of a particulate filter (10), dislodging ash from the filter with fluid and carrying the ash in the fluid through an inlet (15) of the filter (see col. 3, lines 50-56). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply a fluid to the filter outlet to back flush the filter as taught by Rosenberg to provide a novel filter cleaning device which is capable to thoroughly and efficiently cleaning filters.

Claims 2-5, 9, 10 and 12-17 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg (6,641,646 B2), in view of Davis et al (6,251,294 B1).

Claims 2-5, 9, 10 and 12-17 call for the step of sending acoustic waves such as ultrasonic waves through the fluid to assist in dislodging ash of the filter. Davis et al disclose a self generating filter unit wherein an ultrasonic transducer (36) periodically energizable to dislodge caked solids from a filter element housing (see col. 3, line 58 through col. 4, line 7 and col. 5, lines 18-23). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide an acoustic waves such as ultrasonic waves as taught by Davis et al in the filter apparatus of Rosenberg since the ultrasonic vibration would ultrasonically vibrate or cavitate the

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liquid surrounding the filter element and thus dislodge solid caked on the outside of the filter and effectively clean the filter element.

Response to Arguments

Applicant's arguments filed on October 20, 2004 have been fully considered but they are not persuasive.

Applicant argues that the Rosenberg reference does not disclose "a fluid such as a liquid is flowed slowly and steadily through the filter, and while acoustic waves assist in dislodging the ash from the long passages and the thin walls, the fluid flowing through the filter carries the ash out of the filter". The Examiner respectfully disagrees. Claim 1 broadly calls for a method of cleaning a diesel particulate filter by flowing a fluid into the outlet of a filter, dislodging ash from the filter with the fluid, and carrying the ash in the fluid through an inlet of the filter. The word "fluid" is broadly claimed and is not limited to only water but also air. Therefore, Rosenberg's disclosure of air pulses for dislodging ash for a filter read on the language of the claims.

Applicant's arguments with respect to claims 1-20 have been thoroughly considered but are moot in view of the new ground(s) of rejection as discussed above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh-Chau Pham
Patent Examiner
Art Unit: 1724
December 30, 2004